



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,716	09/22/2000	Kentaro Shimada	H-944	9945

24956 7590 06/18/2004

MATTINGLY, STANGER & MALUR, P.C.
1800 DIAGONAL ROAD
SUITE 370
ALEXANDRIA, VA 22314

EXAMINER

KIM, HONG CHONG

ART UNIT	PAPER NUMBER
----------	--------------

2186

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/667,716	Applicant(s) SHIMADA, KENTARO	
	Examiner Hong C Kim	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7, 8 and 10-14 is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 9 is/are rejected.
- 7) ☒ Claim(s) 2 and 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

BEST AVAILABLE COPY

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/22/2000</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. Claims 1-¹⁴~~18~~ are presented for examination. This office action is in response to the application filed on 6/6/02.
2. The information disclosure statement (IDS) submitted on 09/22/00 is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claim 1 is ~~and~~^{is} rejected under 35 U.S.C. 102(a) as being anticipated by Freerksen et al. (Freerksen) U.S. Patent 6,351,791.

As to claim 1, Freerksen discloses the invention as claimed. Freerksen discloses a multiprocessor machine (Fig. 1) comprising; a plurality of processors (Fig. 1 Refs. 14, 16, nad 18); a first cache (Fig. 1 Ref. 32) shared by said plurality of processors; and a first controller (Fig. 1 Ref. 30) providing control so that data accessed by at least two processors out of said plurality of processors is given higher priority (table 1 Shared is higher priority than exclusive reads on this limitation) in being saved to said first cache compared to data accessed by only one of said plurality of processors (Table 1, definition of exclusive).

4. Claim 9 is ^{II}~~are~~ rejected under 35 U.S.C. 102(a) as being anticipated by Arimilli et al. (Arimilli) U.S. Patent 6,185,658.

As to claim 9, Arimilli discloses the invention as claimed. Arimilli discloses a method for controlling cache comprising: a first step evaluating whether data stored in a cache associated with one of a plurality of processors was accessed by a processor other than a processor associated with said cache (HRT-MESI reads on this limitation Fig. 4 and col. 4 lines 16-40) ; a second step selecting an area containing data determined in said first step to have been accessed by another processor when new data is stored in said cache (col. 8 lines 25-26, evicting invalid states); a third step selecting an area of said cache if no area can be selected in said second step (col. 8 lines 47-48, evicting modified state); and a fourth step storing new data in an area selected by either said second step or said third step (col. 8 lines 25-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freerksen et al. (Freerksen) U.S. Patent 6,351,791 in view of Arimilli et al. (Arimilli) U.S. Patent 6,185,658.

As to claim 3, Freerksen discloses the invention as claimed above. However, Freerksen does not specifically disclose plurality of processors and said first cache and said first controller are integrated on a single LSI chip.

Arimilli discloses plurality of processors and said first cache and said first controller are integrated on a single LSI chip (col. 1 lines 50-55) for the purpose of decreasing foot print and increasing the speed..

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate plurality of processors and said first cache and said first controller are integrated on a single LSI chip as taught by Arimilli into the system of Freerksen for the advantages stated above.

Allowable Subject Matter

6. Claims 2, 4, 5, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim, any intervening claims, and overcome claim objection.

Claims 7-8 and 10-14 are allowed.

Conclusion

BEST AVAILABLE COPY

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

2. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).

3. When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. ' 1.111(c).

4. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hong Kim whose telephone number is (703) 305-3835. The Examiner can normally be reached on the weekdays from 8:30 AM to 5:00 PM.

BEST AVAILABLE COPY

Art Unit: 2186

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matt Kim, can be reached on (703) 305-3821.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to TC-2100:
(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

HK 
Primary Patent Examiner
June 6, 2004